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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,849	03/14/2001	Douglas M. Kavner	RTN-100AUS	3784
22494	7590	08/09/2005	EXAMINER	
DALY, CROWLEY, MOFFORD & DURKEE, LLP SUITE 301A 354A TURNPIKE STREET CANTON, MA 02021-2714			LIEU, JULIE BICHNGOC	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,849

Applicant(s)

KAVNER, DOUGLAS M.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/10/01</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to Applicant's response filed January 24, 2005. No claims have been amended, canceled, or added.

Corrected drawings have also been received and approved by the examiner.

2. The indicated allowability of claims 1-22 and 24-36 is withdrawn in view of the newly discovered reference(s) to Nasburg (US Patent No. 5,696,503). Rejections based on the newly cited reference(s) follow.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1-5, 10-17, and 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Nasburg (US Patent No. 5,696,503) (cited by the applicant).

Claim 30:

Nasburg discloses an incident detection system comprising:

- a. a traffic management center processor MATS connected to a data network 510;

- b. a plurality of unique vehicle data readers Smart Sensors (FOV) connected to the data network such that uniquely identified data (vehicle identification) are read from each of a plurality of vehicles (col. 11, lines 18-25);
- c. a correlation processor MATS wherein said uniquely identified data are correlated (col. 12 line 17 to col. 14 line 12); and
- d. an incident detection processor (part of MATS).

It is not clearly stated in Nasburg that the count of overdue vehicles and early arriving vehicles are obtained. Nonetheless, the reference implicitly suggests such feature since system measure the link time of all vehicles and origin/destination pairs of the vehicles. Col. 4, lines 35-55.

Claim 31:

Nasburg provides a plurality of traffic probe readers, each of the plurality of the probe readers having an automatic vehicle identification reader (col. 11, lines 18-25).

Claim 33:

The correlation processor inherently included in MATS is connected to the traffic management center processor.

Claim 35:

The incident processor inherently included in MATS is connected to the traffic management center processor.

Claims 1-2:

The rejection of claims 1-2 recites the rejection of claims 30 and 31 except they are method claims.

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Claim 3:

The readers in Nasburg are spaced apart. It is not clear whether the distance between them is 5 km or not; however, one skilled in the art would have known placing the readers at a certain distance apart to achieve the optimum result.

Claim 4:

The information obtained from the vehicle in Nasburg is at least one of vehicle speed, expected travel time between two adjacent readers, and expected arrival time of each of the plurality of vehicles at one of the plurality of readers.

Claim 5:

Nasburg discloses determining the number of vehicles potentially affected by an incident by determining the expected time for each vehicle to be detected by a particular one of the plurality readers. Col. 4, lines 36-55.

Claim 10:

In Nasburg, the system detects an incident in response to the number of each of the plurality of vehicles potentially affected by an incident exceeding the predetermined sample threshold. See summary of invention.

Claim 11:

In Nasburg's, each of the plurality of vehicles potentially affected by incident is overdue at one of the plurality of readers.

Claim 12:

In Nasburg's, each of the plurality of vehicles potentially affected by incident has arrived early at one of the plurality of readers.

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Claim 13:

It is inherent that the number of each of the plurality of vehicles potentially affected by an incident is counted over a predetermined interval.

Claim 15:

The plurality of readers in Nasburg comprises transponders reader.

Claim 16:

The plurality of readers in Nasburg comprises a license plate reader.

Claim 17:

In the combined system of Hassett and Krause, an instantaneous speed of each of the plurality of vehicles is determined by either the vehicle or the management center, which is a toll gateway sensor.

Claim 23:

The system in Hassett and Krause declares an incident in response to the number of each of plurality of vehicles potentially affected by incidents being greater than the sample threshold.

Claims 24 and 25:

Lacking any criticality as to why excluding counting each vehicle that is overdue or arrives early must be performed, how it would produce any unexpected result, or solve any stated problem, one skilled in the art would have excluded some vehicles from being counted as desired.

Claim 26:

Though none of the references discloses or teaches the step of suppressing the detection of an incident in a roadway segment where the number of vehicles exiting the segment of the

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roadway on an off-ramp over a predetermined interval of time exceeds a predetermined threshold, one skilled in the art would have readily known to suppress the detection as desired. This is only a matter of choice in design.

Claim 27:

Nasburg discloses a method for detecting incidents along a roadway comprising the unordered steps of :

- a. arranging a plurality of traffic readers at intervals along a roadway for reading a transponder disposed on a vehicle;
- b. correlating the transponder readings from each of the plurality of vehicles and expected readings from each of the plurality of vehicles at more than one traffic probe reader;
- c. and detecting incidents which result in an interruption to the flow of traffic.

Probe readers are conventional in the art in detecting vehicles. Therefore, it would have been obvious to one skilled in the art to use probe readers in the combined system of Nasburg as desired.

Claim 28:

The system of Nasburg further comprises the step of writing time and location data into the transponder of each of the plurality of vehicles.

5. Claims 17, 32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasburg (US Patent No. 5,696,503) in view of Hassett et al. (US Patent No. 5,289,183).

Claim 17:

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In the combined system of Nasburg and Hassett, an instantaneous speed of each of the plurality of vehicles is determined by either the vehicle or the management center, which is a toll gateway sensor.

Claim 32:

Nasburg fails to disclose toll collection devices. However, the use of toll collection devices coupled to a plurality of toll gateways is well known in the art as taught in Hassett. One skilled in the art would have readily recognized combining the system of Nasburg and Hassett for vehicle detection. The combined system in Nasburg and Hassett include a plurality of traffic readers, and traffic management center, such that the volume of data transmitted to the traffic management center is minimized.

Claim 34:

The correlation processor in the combined system of Nasburg and Hassett would be connected to the roadside toll collection device.

Claim 36:

The incident processor in the combined system of Nasburg and Hassett connected to the roadside toll collection device.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nasburg (US Patent No. 5,696,503) in view of Hassett et al. (US Patent No. 5,289,183) and further in view of Dwyer et al. (US Patent No. 6,240,941).

Claim 29:

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The combined system of Nasburg and Hassett comprises arranging a plurality of toll gate way at intervals along the roadway for reading a transponder ID disposed in each vehicle.

Hassett fails to teach determining the presence of vehicles not having a transponder ID.

However, this concept is well known in the art as taught in Dwyer et al. (see col. 4, lines 10-28).

Therefore, it would have been obvious to one skilled in the art to apply this concept in the combined system of Nasburg and Hassett to allow toll collection from vehicle without transponders.

Allowable Subject Matter

7. Claims 6-9, 14, and 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-573-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a stylized flourish extending to the right.

Julie Lieu
Primary Examiner
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Jul. 28, 05